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ORAL ARGUMENT SCHEDULED FOR FEBRUARY 26 & 27, 2001

No. 00-5212 (Consolidated with No. 00-5213)

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

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UNITED STATES OF AMERICA,
Plaintiff-Appellee,

v.

MICROSOFT CORPORATION,
Defendant-Appellant.

_____

ON APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

No. 98-1232 (TPJ)
Hon. Thomas Penfield Jackson, United States District Judge

_____

BRIEF OF LAURA BENNETT PETERSON, AMICUS CURIAE, URGING REVERSAL OR VACATION OF THE JUDGMENT BELOW

_____

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January 23, 2001

CERTIFICATES PURSUANT TO CIRCUIT RULES 28 AND 29

Certificate as to Parties, Rulings, and Related Cases

All parties, intervenors, and amici who appeared before the District Court, together with all parties and amici in this Court, are listed in Microsoft's Brief at i-ii.

Microsoft's Brief also lists the rulings under review and related cases at ii-iv.

Interest of Amicus Curiae

Laura Bennett Peterson is an antitrust scholar, economist, and member of the bar of this and other Courts. By order dated November 3, 2000, this Court granted her leave to participate in this proceeding as an amicus curiae.

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INTRODUCTION

"What I want to do is confront the Court of Appeals with an established factual record which is a fait accompli."[1] Are the findings of fact below as unassailable as these words, attributed to Judge Jackson, suggest? Based on sound principles of law and economics and of appellate review, any "fait accompli" should be short-lived.

STATEMENT OF ISSUES

The district court found an "applications barrier to entry" into a narrowly-defined market, and "monopoly power" derived therefrom. It viewed Microsoft's conduct as an exercise of monopoly power in an effort to preserve this barrier. It concluded that Microsoft violated the antitrust laws by tying, monopolization, and attempt to monopolize, and ordered a remedy that includes divestiture and disclosure of software code. The issues presented are:

1. Whether the district court's findings, in particular its finding of an "applications barrier to entry," are based on sound economic principles and support its conclusions and final judgment;

2. Whether the district court's findings are clearly erroneous or, alternatively;

3. Whether its findings involve mixed questions of law and fact and are subject to a less deferential de novo standard of review that they cannot meet.

[1] Quoted in James V. Grimaldi, Microsoft Judge Lashes Out: Jackson Says Panel That Will Hear Appeal "Made Up" Facts, Washington Post, Jan. 9, 2001, at E11, col. 1; see David L. Wilson, Judge Strove for "Bulletproof" Decision, Analysts Say, Knight Ridder/Tribune News Service, Nov. 7, 1999, available in LEXIS, Nexis Library, Wire Service Stories File.

STATEMENT OF THE CASE

I concur with Microsoft's Statement of the Case (Microsoft's Brief at 2-11) with the following additions and amplifications:

Microsoft moved for summary judgment on all counts of the Complaint. The district court denied its motion on all but the States' separate claim of monopoly "leveraging." United States v. Microsoft Corp., 1998-2 Trade Cas. (CCH) ¶ 72,261, at 82,668 (D.D.C. 1998). Among the court's conclusions: "The antitrust laws are implicated . . . if it can be shown that Microsoft constructed *artificial* entry barriers that further restrict the naturally difficult task of providing alternatives to Microsoft's operating system." Id. at 82,672 (emphasis in original).

The district court issued its findings of fact on November 5, 1999. United States v. Microsoft Corp., 84 F. Supp. 2d 9 (D.D.C. 1999) [hereinafter "Findings"]. In a catchall prologue to its findings, the court recites that it "has considered the record evidence submitted by the parties, made determinations as to its relevancy and materiality, assessed the credibility of the testimony of the witnesses, both written and oral, and ascertained for its purposes the probative significance of the documentary and visual evidence presented." Id. at 12. The court makes no citations to the record and only rarely specifies the factors, such as a weighing of witness' relative credibility, that support individual findings.

The parties submitted proposed conclusions of law in January and February 2000. The court heard arguments thereon in late February 2000 and entered its conclusions of law on April 3, 2000. United States v. Microsoft Corp., 87 F. Supp. 2d 30 (D.D.C. 2000) [hereinafter

"Conclusions"]. Such a degree of discontinuity between the findings of fact and the conclusions of law is atypical.[2]

STATEMENT OF FACTS

I concur with Microsoft's Statement of Facts (Microsoft's Brief at 11-64), adding and emphasizing the following:

Three features of the computer software industry are noteworthy and undisputed. First, the industry exhibits increasing returns to scale. United States v. Microsoft Corp., 147 F.3d 935, 939 (D.C. Cir. 1998) (Williams, J.) (noting "negligible" marginal costs and declining long-run average costs); United States v. Microsoft Corp., 56 F.3d 1448, 1452 (D.C. Cir. 1995) (Silberman, J., *per curiam)*; Findings, supra, 84 F. Supp. 2d at 20 (¶ 38, under the subheading "Description of the Applications Barrier to Entry").

Second, the computer software industry displays network economies. United States v. Microsoft, supra, 147 F.3d at 939; United States v. Microsoft, supra, 56 F.3d at 1452; Findings, supra, 84 F. Supp. 2d at. 20 (¶ 39, also under the subheading "Description of the Applications Barrier to Entry"). In the words of Nobel Laureate Kenneth Arrow:

> A software product with a large installed base has several advantages . . . . Installed base is particularly important to the economic success of an operating system software product. . . . The larger the installed base of a particular operating system, the more likely it is that independent software vendors will write programs that run on that operating system, and . . . the more valuable the operating system will be to consumers.

Quoted in United States v. Microsoft, supra, 56 F.3d at 1452.

Third, the rate of technological change in the computer software industry is rapid. "The

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[2] Antitrust scholar Herbert Hovenkamp comments: "This is a rather idiosyncratic situation. Ordinarily judges don't do this [split decision]." Quoted in James V. Grimaldi & Jay Greene, Ruling Could Haunt for Years: Experts Say Judge's Decision May Prompt Many Other Lawsuits, Seattle Times, Nov. 6, 1999, available in LEXIS, Nexis Library, Major Newspapers File.

software industry in general is characterized by dynamic, vigorous competition. . . . What eventually displaces the leader is often not competition from another product within the same software category, but rather a technological advance that renders the boundaries defining the category obsolete." Findings, supra, 84 F. Supp. 2d at 25-26 (¶ 59, under the subheading "Price Restraint Posed by Long-Term Effects"); see Microsoft's Brief at 16-19; Brief of Association for Competitive Technology and Computing Technology Industry Association as Amici Curiae at 3-4.

While acknowledging these characteristics of the computer software industry, the district court went on to find that Microsoft has "a dominant, persistent, and increasing share" of the relevant market for "Intel-compatible PC operating systems worldwide," Findings, supra, 84 F. Supp. 2d at 14, 19 (¶¶ 18, 35), and enjoys "monopoly power" derived from "three main facts": (1) its "extremely large and stable" market share, (2) the "high [applications] barrier to entry" that "protect[s]" this market share, and (3) the "lack," "largely as a result of that barrier," of "a commercially viable alternative to Windows." Id. at 19 (¶ 34); see id. at 24 (¶ 53) ("Microsoft's market share and the applications barrier to entry together endow the company with monopoly power . . . ."). The court concluded that Microsoft "engaged in a concerted series of actions designed to protect the applications barrier to entry, and hence its monopoly power, from a variety of middleware threats, including Netscape's Web browser and Sun's implementation of Java." Id. at 111 (¶ 409).

The district court's entire evaluation of consumer welfare effects comes under the heading of "THE EFFECT ON CONSUMERS OF MICROSOFT'S EFFORTS TO PROTECT THE APPLICATIONS BARRIER TO ENTRY." Id. at 110; see id. at 110-12. It found that Microsoft's actions "contributed to improving the quality of Web browsing software, lowering its cost, and increasing its availability, thereby benefiting consumers." Id. at 110-11 (¶ 408).

The court also determined, however, that Microsoft's actions resulted in direct harm to an unspecified number of consumers, id. at 111 (¶ 410), as well as indirect harm from "unjustifiably distorting competition." Id. at 111-12 (¶ 411); see id. at 112 (¶ 412).

SUMMARY OF ARGUMENT

The "applications barrier to entry" is the springboard for the district court's analysis of "monopoly power," of Microsoft's, the purported monopolist's, conduct, and of consumer harm. The court's findings on this barrier lack a proper basis in fact, economics, and law and do not support its conclusions of law or its remedy, which includes divestiture.

Publication of the findings of fact before the conclusions of law were briefed, argued, or issued compounded the court's errors. Its findings with respect to the "applications barrier to entry" are unsustainable under either the clearly erroneous or, *a fortiori*, the less deferential de novo standard of review. De novo review is warranted in light of the mixed questions of law and fact this case presents. The judgment that rests on these findings cannot stand.

ARGUMENT

I. The District Court's Analysis of Barriers to Entry and Other Aspects of Market Structure, Conduct, and Performance Is Fundamentally Flawed and Vitiates Its Findings of Fact, Conclusions of Law, and Remedy Based Thereon.

The district court's findings, and the theories upon which they uneasily rest, are deficient in many respects. I focus here, given page limitations, on the findings and theory of an "applications barrier to entry. " A lowering of this "barrier to entry" is the court's *deus ex machina* for competitive (or competitors') ills and the target of its remedy.

Consideration of barriers to entry, and not market shares alone, is essential to the analysis of "market [or monopoly] power." "[T]he lower the barriers to entry, and the shorter the lags of

new entry, the less power existing firms have." Ball Memorial Hosp., Inc. v. Mutual Hosp. Ins., Inc., 784 F.2d 1325, 1335 (7th Cir. 1986) (Easterbrook, J.). "In the absence of significant barriers, a company probably cannot maintain supracompetitive pricing for any length of time." United States v. Baker Hughes Inc., 908 F.2d 981, 987 (D.C. Cir. 1990) (Thomas, J.).

Although the district court finds that Microsoft enjoys "monopoly power," the Complaint does not allege, and the court does not find, that Microsoft obtained this power by illegal means. The finding of monopoly power is based on dated estimates and projections (published more than two years before the findings themselves) of an unduly narrowly defined market[3] -- the market for Intel-compatible personal computer (PC) operating systems, Findings, supra, 84 F. Supp. 2d at 14 (¶ 18) -- together with the "applications barrier to entry." "Microsoft's dominant market share is protected by a high [applications] barrier to entry. . . . [L]argely as a result of that barrier, Microsoft's customers lack a commercially viable alternative to Windows." Id. at 19 (¶ 34).

Oddly enough, this barrier is nowhere defined by the district court, even though it plays such a crucial role in the court's analysis. See id. at 19-22 (¶¶ 36-44) ("Description of the Applications Barrier to Entry"); "Conclusions," supra, 87 F. Supp. 2d at 36-37. More oddly still, none of the academic economists who submit declarations in support of the governments' remedy define what they mean by the "applications" – or any – "barrier to entry"; they simply rely uncritically on the district court's formulation. See Declaration of Rebecca M. Henderson [hereinafter "Henderson Decl."] ¶¶ 6, 42); Declaration of Paul M. Romer [hereinafter "Romer

[3] For a critique of, among other things, the court's definition of the relevant market, see Robert A. Levy and Alan Reynolds, Microsoft's Appealing Case, Cato Institute Policy Analysis No. 385, at 7-11 (Nov. 9, 2000).

Kenneth G. Elzinga, David S. Evans, and Albert L. Nichols analyze the remedy, including (at 45-51) logical inconsistencies between Appellees' theories on liability and their theories on remedy, in U.S. v. Microsoft: Remedy or Malady? (forthcoming article, George Mason Law Review; Nov. 21, 2000 draft) (copy provided to the Court and parties).

Decl."] ¶ 4; Declaration of Carl Shapiro [hereinafter "Shapiro Decl."] under the heading "IIA. The Court's Findings and Remedy Objectives."

The district court does inform us that Windows supports more than 70,000 applications, Findings, supra, at 20 (¶ 40), while Apple's operating system supports only 12,000, id. at 22 (¶ 47). The court asserts, but does not explain how, "[t]he inability of Apple to compete effectively" with Microsoft reflects this disparity or "provides [an] example of the applications barrier to entry in operation," rather than of other factors that it may not even have considered. See id. The court's emphasis on the sheer number of applications, as opposed to the productivity or other utility they provide, is, in any event, misleadingly exaggerated[4] as well as misplaced. According to the governments' remedy experts, the barriers to entry[5] that shield Microsoft from effective competition would be meaningfully reduced if only the handful of applications in Microsoft's Office suite alone could run on Linux and other non-Windows operating systems. See Henderson Decl. ¶ 22; Shapiro Decl. under "IIIA. Lower Entry Barriers into Operating Systems." If that reasoning is correct, it is not apparent why the availability of Office for the Mac operating system has not been more of a boon to Apple. Nor is it apparent under the governments' remedy theory why software developers, who "generally write applications first, and often exclusively, for the operating system that is already used by a dominant share of all PC users," Findings, supra, 84 F. Supp. 2d at 18 (¶ 30), would write more or better programs for Microsoft's competitors with the governments' proposed divestiture.

Although it does not define the "applications barrier to entry," the district court does identify what it sees as some of its characteristics: increasing returns to scale and network economies. Id. at 20 (¶¶ 38-39); see discussion supra at 3. The court does not explain how

[4] See Richard McKenzie, Microsoft's "Applications Barrier to Entry": The Missing 70,000 Programs, Cato Institute Policy Analysis No. 380, at 3-10 (Aug. 31, 2000).

[5] At the remedies stage of the proceedings, the government Appellees refer frequently to "barriers to entry," without specifying what, if anything, is meant aside from the "applications barrier to entry."

these intrinsic or natural features of certain computer software markets -- which may explain the emergence, at least temporarily, of leading firms in certain segments -- constitute or contribute to barriers to entry.

The court had suggested, in deciding Microsoft's summary judgment motion, a distinction between natural and artificial entry barriers:

> Plaintiffs concede that Microsoft's dominance in the operating system market does not, by itself, warrant concern. There is no reason to believe that the market, left to itself, will not generate alternatives to Windows, despite the high barriers to entry. . . . The antitrust laws are implicated, however, if it can be shown that Microsoft constructed *artificial* entry barriers that further restrict the naturally difficult task of providing alternatives to Microsoft's operating system.

United States v. Microsoft, supra, 1998-2 Trade Cas. (CCH) ¶ 72,261, at 82,672 (emphasis in original).[6] But the "naturally difficult task" of providing an alternative to Windows -- especially under conditions of increasing returns to scale and network economies -- is no more a barrier to entry than the "natural monopoly" this Court recognized in United Distribution Cos. v. Federal Energy Regulatory Comm'n [FERC], 88 F.3d 1105, 1122 n.4 (D.C. Cir. 1996), cert. denied *sub nom*. Associated Gas Distribs. v. FERC, 520 U.S. 1224 (1997), or the natural monopoly or "superior skill, foresight, and industry" Judge Hand noted in United States v. Aluminum Co. of America, 148 F.2d 416, 430 (2d Cir. 1945).

"The disadvantage of new entrants as compared to incumbents is the hallmark of an entry barrier." Los Angeles Land Co. v. Brunswick Corp., 6 F.3d 1422, 1428 (9th Cir. 1993), cert. denied, 510 U.S. 1197 (1994). Other courts have adopted a different hallmark or definition of an entry barrier. See generally IIA Phillip E. Areeda et. al., Antitrust Law ¶¶ 420-22, at 55-77 (1995). Judge Posner observes:

[6] This distinction, from which the court departs in its findings, is imperfect but an improvement over the sweeping condemnation of all supposed "entry barriers."

> A barrier to entry is commonly used in a quite literal sense to mean anything which a new entrant must overcome in order to gain a foothold in the market, such as the capital costs of entering the market on an efficient scale. This is a meaningless usage, since it is obvious that a new entrant must incur costs to enter the market, just as his predecessors, the firms now occupying the market, did previously. A more precise definition has been offered by [Nobel Laureate George] Stigler: a barrier to entry is a condition that imposes higher long-run costs of production on a new entrant than are borne by the firms already in the market.

Richard A. Posner, Antitrust Law: An Economic Perspective 59 (1976). A sharper definition still is provided by Harold Demsetz. As Demsetz points out, the cost differentials to which Stigler alludes do not impede socially desirable entry if they reflect simply upward sloping supply curves for inputs.[7]

An inchoate and over-inclusive concept of an entry barrier, together with a confusion between competitors and competition, leads the district court to condemn as "a vicious cycle" for potential entrants the very network effects that help to satisfy consumers' "interests in variety, choice, and currency" of software applications. Findings, supra, 84 F. Supp. 2d at 20 (¶ 40). These network effects encourage, too, a competitive price for Windows: Supracompetitive prices would diminish demand for applications (including Microsoft's own applications as well as those of independent software vendors) and reduce software developers' incentives to write applications that run on Windows. These network effects encourage, at the same time, competitive prices for applications (including Microsoft's own applications, such as Office) that run on Windows. The proposed remedy, which would separate Microsoft's "Operating Systems Business" from its complementary "Applications Business," United States v. Microsoft Corp., 97

[7] Harold Demsetz, Barriers to Entry, 72 Am. Econ. Rev. 47 (Mar. 1982), summarized in James W. Meehan, Jr. & Robert J. Larner, The Structural School, Its Critics, and Its Progeny: An Assessment, in Economics and Antitrust Policy 179, 188 (Robert J. Larner & James W. Meehan, Jr. eds. 1989). Demsetz' point is noted with approval in Ball Memorial Hospital, supra, 784 F.2d at 1335.

F. Supp. 2d 59, 64-65 (D.D.C. 2000), would in fact increase prices through a double marginalization effect.[8]

Microsoft's own conduct is, moreover, inconsistent in many respects with the picture the district court paints. If Windows is a sheltered monopoly in a market that excludes alternative platforms for applications, why was Microsoft so "deeply concerned" about Netscape's browser, Findings, supra, 84 F. Supp. 2d at 29 (¶ 72), and so "deeply worried" about Sun's Java technologies, id. (¶ 75)? Why did it invest so heavily in inducing independent software providers to write applications for Windows, id. at 21 (¶ 43), in developing and improving Internet Explorer, id. at 43 (¶ 135), and in undertaking a predatory, as the court saw it, campaign against Netscape, see id. at 44-46 (¶¶ 136-142)?

The district court invariably equates acts by Microsoft consistent with competition on the merits with "exclusionary acts that lacked procompetitive justification," Conclusions, supra, 87 F. Supp. 2d at 39, or "actions that could only have been advantageous if they operated to reinforce monopoly power," Findings, supra, 84 F. Supp. 2d at 28 (¶ 67).[9] Emblematic of the court's approach is the following:

> Microsoft . . . set out to maximize Internet Explorer's share of browser usage at [Netscape] Navigator's expense. . . . Recognizing that pre-installation by OEMs [Original Equipment Manufacturers] and bundling with the proprietary software of IAPs [Internet Access Providers] led more directly and efficiently to browser usage than any other practices in the industry, Microsoft devoted major efforts to usurping those two channels.

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[8] See Elzinga et al., supra n. 3, at 66-68 & nn. 220-26 (quoting Paul Krugman, Reckonings: Microsoft: What Next?, New York Times, Apr. 26, 2000, and reviewing the declarations of the governments' remedy experts as well as Microsoft's offer of proof on May 24, 2000). The authors conclude: "Aside from a dismissive statement by [government expert Carl] Shapiro, we are not familiar with any economist who has questioned this price effect." Id. at 66 n.221. The Shapiro statement appears in his Declaration under "D. Costs of Reorganization," where he perfunctorily asserts that "this concern is very likely outweighed by the [anticipated] lowering of entry barriers . . . ."

[9] "[T]he association of the study of industrial organization with antitrust policy has created a disposition to search for monopolistic explanations for all business practices whose justification is not obvious to the meanest intelligence." Ronald Coase, Industrial Organization: A Proposal for Research, in Policy Issues and Research Opportunities in Industrial Organization (V. Fuchs ed. 1972).

Conclusions, supra, 87 F. Supp.2d at 39. Yet an increased market share is almost invariably a desirable business goal, even if it comes, by definition, at the "expense" of one or more rivals. The minimization of costs through use, for example, of the most efficient means of distribution is also desirable. If foreclosure of competitors (presumably what is meant by usurpation) was intended, as opposed to, say, the preservation of Windows' goodwill value or the negotiation of efficient cross-marketing arrangements, it was far from achieved. See id. at 53 (noting that Netscape distributed 160 million copies of Navigator in 1998 alone). See generally John E. Lopatka & William H. Page, Antitrust on Internet Time: Microsoft and the Law and Economics of Exclusion, 7 Sup. Ct. Econ. Rev. 157, 189-231 (1999) (reviewing efficiency justifications for Microsoft's challenged conduct).

The court at times acknowledges, but proceeds conclusorily to dismiss, procompetitive explanations of Microsoft's conduct. E.g., Findings, supra, 84 F. Supp. 2d at 35 (¶ 99, finding that "Microsoft's concerns with compatibility and quality [of Intel software] were genuine"), 37 (¶ 110, noting "incompatibilities [between Microsoft's and Apple's multimedia technologies] that frustrated consumers and stymied content development"), & 105 (¶¶ 388-89, observing that Microsoft's methods for enabling "calls" to "native" Windows code "were slightly easier for developers to use than the method that derived from the Sun-sponsored effort, and Java applications using Microsoft's methods tended to run faster"). Similarly, the court describes in Schumpeterian terms[10] the "dynamic, vigorous competition" in computer software markets, including "the growth of server-based computing, middleware, and open-source software development," but dismisses as "several years distant" (with, as always, no citations to the record) the competitive impact of these developments. Id. at 25-26 (¶¶ 59-60). The

[10] Compare the district court's "[w]hat eventually displaces the leader is often not competition from another product within the same software category, but rather a technological advance that renders the boundaries defining the category obsolete," Findings, supra, at 25-26 (¶ 59), with "the perennial gale of creative destruction" associated with "competition from the new commodity, the new technology, the new source of supply, the new type of organization." Joseph A. Schumpeter, Capitalism, Socialism and Democracy 83-84 (3d ed. 1950).

governments' economic experts take a similar approach. See Henderson Decl. ¶ 13-17; Shapiro Decl., Part IIA (describing the industry as "fast-moving") and IIB, "Enabling Competition to Windows."

The proposed final judgment proceeds on the assumption that barriers to entry – the proffered one-size-fits-all explanation for market structure, conduct, and performance – were anticompetitively raised by Microsoft and would be lowered with divestiture; an "increased . . . likelihood of competition" would or could ("[t]here is, of course, no guarantee") result. See Plaintiffs' Mem. in Support of Proposed Final Judgment at 15-34 (Apr. 28, 2000) (public redacted version; quoted language at 34); Henderson Decl. ¶¶ 21, 25; Romer Decl. ¶¶ 6, 7; Shapiro Decl. under the heading "IIIA. Lower Entry Barriers into Operating Systems." A striking aspect of the district court's findings, however, is the extent to which Microsoft's "monopoly power" is a paper tiger. Netscape, IBM, Apple, and RealNetworks did not in fact go along with Microsoft's alleged initiatives to restrict the development or promotion of their software. See Findings, supra, 84 F. Supp. 2d at 33 (¶ 91), 37 (¶ 109), 38 (¶ 114), & 39-42 (¶¶ 119-20, 125, 129). Thus it is problematic whether divestiture would reduce any supposed entry barriers because it is less than clear that Microsoft, even if it had intended to raise such barriers, achieved that result.

Microsoft did seem to manage to "thwart . . . OEM [original equipment manufacturer] customization" of Windows. Id. at 61-62 (¶¶ 213, 215). This may, however, have reflected only the legitimate purpose of protecting goodwill and have affected only the distribution of wealth between Microsoft and the OEMs, rather than consumer welfare. See Lopatka & Page, supra, at 228-29. The court also found that Microsoft "quash[ed] Intel's NSP [Native Signal Processing]

software" and discouraged other Intel platform-level software, Findings, supra, at 35 (¶ 102), yet Microsoft's "concerns with compatibility and quality were genuine." Id. at 35 ¶ (99).

Furthermore, there are no explicit findings by the district court, which rejected hearings even on the technical aspects of remedies, to support the hypothesis of lowered entry barriers, and increased competition, after divestiture. Plaintiffs' Memorandum in Support of the Proposed Final Judgment cites to the court's findings only once, concerning consumer preferences that hold regardless of the remedy, in its section on the supposed reduction in entry barriers. See Plaintiffs' Mem., supra, at 32-36, citing at 36 Findings, supra, 84 F. Supp. 2d at 19 (¶ 37) (consumers prefer operating systems that run successive generations of multiple applications in which they have, or might develop, an interest). The governments' experts do not, for their part, specify the extent to which barriers to entry would, they hypothesize, decline with divestiture. See Henderson Decl. ¶¶ 21, 25; Romer Decl. ¶¶ 6-7; Shapiro Decl. under the heading "IIIA. "Lower Entry Barriers into Operating Systems."

The district court does not appear to recognize the costs of any divestiture but looks only to its assumed benefits. See United States v. Microsoft, supra, 97 F. Supp. 2d at 61-63 (D.D.C. 2000); see also Paul Krugman, Reckonings: The Last Refuge, N.Y. Times, June 11, 2000, at 17WK, col. 1 (commenting that the court "in effect dismissed concerns about the economic impact of such a breakup"). The Appellee governments belittle such concerns: "To be sure, there will be short-term dislocations caused by the reorganization. . . . Admittedly, some forms of communication are probably easier within a single firm than across firm lines. But those benefits are modest . . . ." Plaintiffs' Reply Mem. in Support of Proposed Final Judgment at 34 (May 17, 2000). The governments' remedy experts give no hint of familiarity with Nobel Laureate Ronald Coase's insights on transactions costs and the choice between organization within the firm and organization through the market. See Romer Decl. ¶ 65 ("any

communication that could take place between two people when they worked for the same firm can still take place when they work for different firms"); Shapiro Decl. under the heading "IIID. Costs of Reorganization." See generally R. H. Coase, The Nature of the Firm, 4 Economica 386, 386-405 (1937), reprinted in R. H. Coase, The Firm, the Market, and the Law 33-35 (1988).

This dismissive treatment by the Appellee attorneys general of the costs of divestiture – which include, importantly, loss of the economies of vertical integration[11] – is in stark contrast to the approach of former antitrust chief William F. Baxter that led to the modified final judgment in United States v. AT&T, 552 F. Supp. 131 (D.D.C. 1982), aff'd *sub nom.* Maryland v. United States 460 U.S. 1001 (1983). Assistant Attorney General Baxter carefully weighed the tradeoff between the competitive benefits from divestiture of the local operating companies and loss of the economies of vertical integration.[12] Any parallel between the district court's divestiture remedy and the divestiture in AT&T is, for this and other reasons, overdrawn.

There is, however, an important and as yet unnoticed parallel between this case and United States v. Microsoft, supra, 56 F.3d 1448 (D.C. Cir. 1995). This relates to the suggestion, supra at 8, that natural or intrinsic features of a market – such as the increasing returns and network effects that characterize many consumer software markets – are not properly considered barriers to entry. The government's expert, Professor Kenneth Arrow, agreed that

> in an increasing returns market there is a possibility of monopolization, which may be inefficient; but, he claimed, this process is entirely natural. He specifically rejected the notion that the government should intervene where, as he believed was the case here, the market success of the dominant firm was not the result of anticompetitive practices. Professor Arrow concluded that only artificial barriers, such as the licensing practices addressed in the decree, should be regulated or prohibited.

Id. at 1454-55.

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[11] These include "more efficient production, greater ability to develop complementary products, reduced transaction costs, and so forth." Berkey Photo, Inc. v. Eastman Kodak Co., 603 F. 2d 263, 267 (2d Cir. 1979), cert. denied, 444 U.S. 1093 (1980).

[12] Discussions with Professor Baxter in the course of Directed Research, Jan.-Oct. 1981. See generally William F. Baxter, Conditions Creating Antitrust Concern with Vertical Integration by Regulated Industries --"For Whom the Bell Doctrine Tolls," 52 Antitrust L.J. 243 (1983).

This Circuit observed then, in language that applies now:

> The complaint did not allege--because the government did not believe it was true--that Microsoft's dominant market position resulted from illegal means. . . . And since the claim is not made, a remedy directed to that claim is hardly appropriate. . . .Even where the government has proved antitrust violations at trial, the remedies must be of the "same type or class" as the violations . . . .

Id. at 1460 (quoting Zenith Radio Corp. v. Hazeltine Research, Inc., 395 U.S. 100, 132-33 (1969)). The remedy ordered below is unjustified and counterproductive insofar as it is directed at (1) natural or intrinsic market conditions, (2) success that reflects not anticompetitive conduct but superior static and dynamic efficiency, and (3) entry barriers that Microsoft did not demonstrably raise.

The district court's findings of an "applications barrier to entry" that Microsoft illegally maintained to the detriment of consumers are inadequately supported, or actually undermined and contradicted, by its own "facts." Its findings lack a foundation in sound economic principles and do not support its conclusions of law or the final judgment.

II. Assuming Arguendo that the District Court's Findings of Fact Are, Indeed, Findings of Fact, They Should Not Survive Even Review for Clear Error

Microsoft argues: "This Court should . . . reverse the district court's findings of fact if 'clearly erroneous.'" Microsoft's Brief at 68 (citing Rule 52(a) of the Federal Rules of Civil Procedure). This Rule provides in pertinent part:

> In all actions tried upon the facts without a jury . . ., the court shall find the facts specially and state separately its conclusions thereon . . . . Findings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous, and due regard

> shall be given to the opportunity of the trial court to judge of the credibility of the witnesses.[13]

The definitive test in reviewing a district court's findings is set forth in United States v. U.S. Gypsum Co.: "A finding is 'clearly erroneous' when although there is evidence to support it, the reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed." 333 U.S. 364, 395 (1948). Accord, Case v. Morrisette, 475 F.2d 1300, 1307-08 (D.C. Cir. 1973) (Robinson, J). Case adds that a finding is also "'clearly erroneous' if it is without substantial evidentiary support or if it was induced by an erroneous application of the law." Id. at 1037.

In United States v. General Motors Corp., an antitrust conspiracy case like Gypsum, the Court regarded as "clearly erroneous and irreconcilable with its other findings the trial court's conclusory 'finding' that there had been no 'agreement'" in restraint of trade, a "conclusion [that] cannot be squared with its own specific findings of fact." 384 U.S. 127, 142, 140 (1966). See also Lyles v. United States, 759 F.2d 941, 944, 942 (D.C. Cir. 1985) (*per curiam*) (rejecting, in a negligence case, findings characterized as "confused and contradictory," "lack[ing in] coherence and . . . too conclusory to allow for any meaningful appellate review").

The findings in this case on the "applications barrier to entry" meet Gypsum's "clearly erroneous" test, as do any findings that may bear on the remedy. It is difficult even to discern, with respect to the remedy, non-conclusory findings, based on sound principles of law and economics and solid facts, to which this Court might defer. "The Court," it is claimed, "found that Microsoft illegally maintained its monopoly by increasing entry barriers . . . . The proposed

[13] Part (b) of the Rule states in part: "When findings of fact are made in actions tried by the court without a jury, the question of the sufficiency of the evidence to support the findings may thereafter be raised whether or not the party raising the question has made in the district court an objection to such findings or has made a motion to amend them or a motion for judgment." Fed. R. Civ. P. 52(b).

restructuring, which . . . makes competition more likely in the future by reducing barriers to entry in the operating system market, is thus appropriately and precisely related to the violation found by the Court." Plaintiffs' Reply Mem. in Support of Proposed Final Judgment at 20 (May 17, 2000). The claim is hollow and one is left with "a definite and firm conviction that a mistake has been committed." Gypsum, supra, 333 U.S. at 395.

As Wright and Miller explain:

> [R]espect for the findings by the trial court cannot be pressed too far. . . . If the findings are against the clear weight of the evidence or the appellate court otherwise reaches a definite and firm conviction that a mistake has been made, the appellate court will set the findings aside even though there is evidence supporting them that, by itself, would be considered substantial.

9A Charles Alan Wright & Arthur R. Miller, Federal Practice and Procedure § 2585, at 567, 577 (1995).

To make matters murkier, the district court eschewed citations to the record and specifications of when any particular finding turned on credibility judgments. The court provided only a catchall reference to its consideration of "the credibility of the testimony of the witnesses, both written and oral," and other factors. Findings, supra, 84 F. Supp. 2d at 12. It is noteworthy that the Gypsum Court set aside findings as clearly erroneous "[d]espite the opportunity of the trial court to appraise the credibility of the witnesses" in that antitrust conspiracy case. Gypsum, supra, 333 U.S. at 396. "[T]he court of appeals may well find clear error even in a finding purportedly based on a credibility determination." Anderson v. City of Bessemer City, 470 U.S. 564, 575 (1985).

The findings here also warrant heightened scrutiny insofar as they reflect, or may reasonably be seen to reflect, bias or prejudgment. See Microsoft's Brief at 146-150.[14] In

[14] See also Ronald D. Rotunda, Judicial Comments on Pending Cases: The Ethical Restrictions and the Sanctions -- A Case Study of the Microsoft Litigation, 2001 U. Ill. L. Rev. (No. 2, 2001) (forthcoming; Dec. 15, 2000 draft) (copy provided to the Court and the parties); Judge Jackson's Remarks, Washington Post, Jan. 16, 2001, at A20, col. 1 (editorial stating that comments about the Microsoft litigation "cross the line" and "do not instill confidence in the judge's impartiality").

Justice Rehnquist's words: "Presumably any doctrine of 'independent review' of facts exists . . . so that perceived shortcomings of the trier of fact by way of bias or some other factor may be compensated for." Bose Corp. v. Consumers Union of United States, Inc., 466 U.S. 485, 518 (1984) (dissenting opinion joined by Justice O'Connor).

II. The District Court's Findings Involve Mixed Questions of Law and Fact and Do Not Meet the Applicable de Novo Standard of Review.

The district court erroneously concluded that Microsoft's combination of Internet Explorer with Windows is a tying arrangement in violation of Section One of the Sherman Act, 15 U.S.C. § 1, and that Microsoft has illegally maintained a monopoly in Intel-compatible PC operating systems, and attempted to monopolize a browser market, in violation of Section Two of the Sherman Act, 15 U.S.C. § 2. These erroneous conclusions sprang from two types of mistakes:

First, the district court erred substantively by getting both the economics wrong and the law wrong. The court incorrectly analyzed economic concepts critical to its theory of the case. See Argument I at 5-16 supra. For this reason alone, its findings, particularly with respect to the "applications barrier to entry," are fundamentally flawed and clearly erroneous. See Argument II at 16-18 supra. The court also applied incorrect legal standards to its analysis of the purpose, nature, and effect of Microsoft's conduct.

I concur in this latter regard with Microsoft's analysis of the proper legal standards. See Microsoft's Brief at 69-125. I add that the district court seems consistently to confuse (a) natural and lawful "monopolies" or market "imperfections" with artificially or illegally maintained monopolies and monopolization, (b) efficient, independently profit-maximizing acts or practices, taken or adopted for legitimate business purposes, with coercion and predation, and (c) injury to

competitors with injury to competition. The antitrust laws must not be interpreted to deter the very competitive forces they are designed to protect. See, e.g., Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 226 (1993); Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 458-59 (1993); Neumann v. Reinforced Earth Co., 786 F.2d 424, 427 (D.C. Cir. 1986) (Bork, J.); Frank H. Easterbrook, On Identifying Exclusionary Conduct, 61 Notre Dame L. Rev. 972, 973-74 (1986).

Second, the district court erred procedurally -- and ended up erring substantively -- when it bifurcated its findings of fact from its conclusions of law in this complex antitrust case. Although the court issued its findings of fact on November 5, 1999, the parties did not submit proposed conclusions of law until January and February 2000. The court heard arguments thereon in late February 2000 and handed down its conclusions of law on April 3, 2000.

The district court, in so doing, treated mixed questions of law and fact[15] – questions that implicate or ask such things as what is the "relevant market," a "monopoly," "monopoly power," an improper exercise of such power, a "barrier to entry," "procompetitive" or legitimate business conduct, "anticompetitive" or illegitimate, including "predatory," business conduct, "competition," and "consumer welfare" – as if they were strictly issues of fact. Whether Microsoft illegally maintained its "monopoly power" by shoring up the "applications barrier to entry" is, for example, a mixed question (involving several subquestions) of law and fact. By answering such mixed questions of law and fact in its findings, the district court unavoidably built legal conclusions into the "facts" it found and presupposed, or assumed the truth of, its later legal conclusions. By issuing its findings before it had the benefit (except for the limited purposes of deciding Microsoft's summary judgment motion) of briefing and argument on the

[15] Mixed questions consider "whether the rule of law as applied to the established facts is or is not violated," Pullman-Standard v. Swint, 456 U.S. 273, 289 n.19 (1982); they involve "'the application of legal principles to the historical facts of [a] case,'" Blair v. Armontrout, 916 F.2d 1310 (8th Cir. 1990), cert. denied, 502 U.S. 825 (1991) (quoting Cuyler v. Sullivan, 446 U.S. 335, 342 (1980)).

substantive law, the court also increased the risk that it would make factual mistakes induced by erroneous assumptions or presuppositions about substantive antitrust law.

The findings of fact in this case unambiguously contain conclusions of law. Compare Findings, supra, 84 F. Supp. 2d 9, with Conclusions, supra, 87 F. Supp.2d 30.[16] "[T]he label a trial court places on a determination as either a finding of fact or a conclusion of law is not controlling, and if the appellate court concludes that the trial court mislabeled a conclusion of law as a finding of fact, it may disregard the label and review the issue de novo." 3 James Wm. Moore et al., Moore's Manual: Federal Practice and Procedure § 23.08[3], at 23-34 (2000); accord, 9A Charles Alan Wright & Arthur R. Miller, Federal Practice and Procedure § 2588, at 601 (1995); see Note, Rule 52(a): Appellate Review of Findings of Fact Based on Documentary or Undisputed Evidence, 49 Va. L. Rev. 506, 529 n.130 (1963) ("The veil of 'finding of fact' should be pierced when the occasion merits it"), citing Baumgartner v. United States, 322 U.S. 665 (1944) (Frankfurter, J.).

Antitrust cases -- especially cases, like this, that involve applications of the "rule of reason," as opposed to rules of per se illegality – quintessentially involve mixed questions of law and fact. In such "rule of reason"antitrust cases, the

> mode of reasoning from primary facts to the . . . determination of their legal consequences depends upon the various law-declaration criteria reflected in step #2 ["elaborating the criteria for deciding . . . unreasonableness"].
> . . . . [A] conscientious judge sitting without a jury . . . is engaged in a continuous process of rule formulation, including the formulation and application of a series of tentative presumptions that are stated and refined in terms of the judge's perception about the

[16] "While the judge technically hasn't issued what are known as 'conclusions of law' in the [Microsoft] case . . . the construction, detail, and vigor of the opinion he issued [on Nov. 5,1999] known as the 'findings of fact' leave no doubt as to what the end result of the trial will be, say antitrust lawyers. 'All he did was leave off a single sentence at the end of each paragraph: 'And therefore I find that they violated the law,'' said Robert Litan, director of economic studies at the Brookings Institution [and] a former deputy assistant attorney general in the Justice Department's antitrust division." Wilson, Judge Strove for "Bulletproof" Decision, Analysts Say, supra n.1. One is reminded of the Queen's words, "Sentence first, verdict afterwards," in Lewis Carroll's Alice's Adventures in Wonderland.

> primary facts in the case. . . . [E]ven that final determination of legal consequences is a process of law declaration, for it indicates the legal consequences that attend a particular set of primary facts.

II Phillip E. Areeda *et al*., Antitrust Law: An Analysis of Economic Principles and Their Application ¶ 306, at 57-58 (2d ed. 2000). See also Kenneth Culp Davis & Richard J. Pierce, Jr., II Administrative Law Treatise § 10.6, at 154 (3d ed. 1994) ("Appellate court judges resolve issues of legislative fact routinely in the process of interpreting and applying the typically broad language of statutes. The antitrust laws illustrate this phenomenon particularly well."); Stephen A. Weiner, The Civil Nonjury Trial and the Law-Fact Distinction, 55 Cal. L. Rev. 1020, 1041, 1056 (1967) (urging "free reviewability [of] the product of applying law to fact" and arguing that his conclusions about the desirable scope of appellate review in non-jury negligence cases "are relevant to other cases, particularly those which state the controlling principle of law as a general standard of reasonableness").

Mixed questions of law and fact have weighed heavily in several major antitrust cases. In United States v. General Motors, the district court's ultimate conclusion that there was no conspiracy in violation of Section One of the Sherman Act "cannot be squared with its own specific findings of fact." General Motors, supra, 384 U.S. at 140. The Court went on to say:

> [T]he ultimate conclusion by the trial judge . . . is not to be shielded by the "clearly erroneous" test embodied in Rule 52(a) . . . . [citing the Rule and United States v. Parke, Davis & Co., 362 U.S. 29, 44-45 (1960)]. As in Parke, Davis, . . . the question here is not one of "fact," but consists rather of the legal standard required to be applied to the undisputed facts of the case [citing another important antitrust case, United States v. Singer Mfg. Co., 374 U.S. 174, 194 n.9 (1963)].
>
> In any event, we resort to the record not to contradict the trial court's findings of *fact*, as distinguished from its conclusory "findings," but to supplement the court's factual findings and to assist us in determining whether they support the court's ultimate legal conclusion that there was no conspiracy.

Id. at 141 n. 16 (emphasis in original). In Gypsum, moreover, the Court carefully evaluated the backdrop against which most of the government's witnesses had, on cross-examination, denied concerted activity. See Gypsum, supra, 333 U.S. at 395-96. "Where such testimony is in

conflict with contemporaneous documents we can give it little weight, particularly when the crucial issues involve mixed questions of law and fact." Id. at 396.

This Circuit Court has, in a related case, undertaken de novo review of the district court's interpretation of a consent decree. United States v. Microsoft, supra, 147 F.3d at 945 n.7. The lower court had made no findings of fact as to the parties' intent. Id. This Court observed that "the centrality of intent would often make the deference [had there been such findings] swallow the de novo review, a result our cases do not seem to contemplate." Id. "[R]eview for clear error cannot fade off into complete deference, else the appellate court's law-finding (or law-forming) function would be disconnected from the real world." United States v. Pollard, 959 F.2d 1011, 1033 (D.C. Cir.) (Williams, J., dissenting in part), cert. denied, 506 U.S. 915 (1992).

In determining the appropriate standard of review for mixed questions of law and fact, this Circuit "make[s] a reasoned judgment whether the risk of an erroneous trial level decision, or the need to clarify the governing law, or any other value secured by review de novo, is warranted in view of the added costs of such review." Barbour v. Browner, 181 F.3d 1342, 1345 (D.C. Cir. 1999) (Ginsburg, J.). The criteria Judge Ginsburg sets forth weigh in favor of de novo review here, even in light of "the added costs." First, "the risk of an erroneous trial level decision" is high, both for the particular reasons cited above and for more general reasons. The probability of error is increased where, as here, novel technology and novel business practices, such as Microsoft's combination of its browser with its operating system, are involved. "[I]n antitrust law, . . . courts have recognized the limits of their institutional competence and have on that ground rejected theories of 'technological tying.'" United States v. Microsoft, supra, 147 F.3d at 949.

In Judge Easterbrook's words:

> The conditions for useful legal intervention may be met when we know a lot about the practice—for when we know but little the risk of error goes up, and the risk of false

> positives [condemnation of a business practice that is efficient and beneficial to consumers] may be substantial. People are quick to condemn what they do not understand. . . . Judges move slower than markets but faster than the economics profession, a deadly combination.

Frank H. Easterbrook, Comparative Advantage and Antitrust Law, 75 Cal. L. Rev. 983, 985-86 (1987). The risk of error is increased, as he suggests, in rapidly changing markets. Id. at 986. In this case, the nature of the market is "constantly morphing." Stuart Minor Benjamin, Stepping into the Same River Twice: Rapidly Changing Facts and the Appellate Process, 78 Tex. L. Rev. 269, 302-03 (Dec. 1999); see id. at 302-03 nn.130-33; Findings, supra, 84 F. Supp. 2d at 25-26 (¶¶ 59-60). The Court here might, like Judge Learned Hand in Alcoa, take judicial notice of legislative facts[17] that have developed since the evidence was closed. See Alcoa, supra, 148 F.2d at 445-46.

An additional rationale for de novo review is "the need to clarify the governing law." Barbour, supra, 181 F.3d at 1345. "As a charter of freedom, the [Sherman] Act has a generality and adaptability comparable to that found to be desirable in constitutional provisions." Appalachian Coals, Inc. v. United States, 288 U.S. 344, 359-60 (1933) (Chief Justice Hughes).

> Where . . . the relevant legal principle can be given meaning only through its application to the particular circumstances of a case, the Court has been reluctant to give the trier of fact's conclusions presumptive force and, in so doing, strip a federal appellate court of its primary function as an expositor of law.

Miller v. Fenton, 474 U.S. 104, 114 (1985) (Justice O'Connor) (8-1).

. In antitrust, clarity

> is a virtue whose importance cannot be exaggerated. The business behavior addressed by antitrust law is planned and normally subject to self-control by the participants when they know the governing legal rules. . . . Uniformity or equality of treatment for those similarly situated is not only a universal element of justice, it is an essential prerequisite for a rationally functioning economy.

[17] See generally Christopher B. Mueller & Laird C. Kirkpatrick, Evidence § 2.3, at 73-79 (2d ed. 1999).

II Areeda et al., supra, Antitrust Law ¶ 306, at 60. It has been ten years since this Court's decision in Baker Hughes, supra, 908 F.2d 981, and the case under review presents a broader opportunity to clarify how entry barriers should be defined and evaluated. The judgment below illustrates, too, the pressing need to delineate the appropriate bounds of antitrust remedies. Antitrust remedial orders should reflect a greater respect for markets than the judgment below reveals, because markets generally work better than courts or other institutions in resolving competitive concerns.

The Supreme Court has reversed remedial orders in Sherman Act cases when supporting findings were wanting. See United States v. E.I. du Pont de Nemours & Co., 366 U.S. 316, 331-35 (1961); Hughes v. United States, 342 U.S. 353, 357-58 (1952); Schine Chain Theatres, Inc. v. United States, 334 U.S. 110, 124-30 (1948); United States v. Paramount Pictures, 334 U.S. 131, 170-74 (1948); Hartford-Empire Co. v. United States, 323 U.S. 386, 418 (1945). In this case, the factual, legal, and economic support for both the "applications barrier to entry" and the ordered relief is feeble. The district court's findings, like the statue of Percy Bysshe Shelley's Ozymandias, fall, whether under a de novo or a more deferential "clear error" review.

The decision below should be reversed because it will have the perverse effect of restricting rather than promoting competition. "[M]istaken inferences in cases such as this one are especially costly, because they chill the very conduct the antitrust laws are designed to protect." Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 594 (1986). The "oppressive thumb on the scale of competitive fortune," Conclusions, supra, 87 F. Supp. 2d at 44, could, ironically, be a judge's.

CONCLUSION

The judgment below should, for these reasons, be reversed. Should any of the claims survive review and require a new trial, judgment as to those claims should be vacated, with the case remanded to a different trier of fact.

Respectfully submitted,

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January 23, 2001

CERTIFICATE OF SERVICE

I hereby certify that on this 23nd day of January, 2001, I served a copy of the foregoing Brief of Laura Bennett Peterson, Amicus Curiae, Urging Reversal or Vacation of the Judgment Below on (1) a listed counsel for each of the participants identified in the Certificate of Service submitted with the Brief for Appellees United States and the State Plaintiffs (Messrs. Smith, Boe, Falk, Black, Cohen, Getman, Bork, and Burton), at the addresses provided therein, (2) on the other individual amici (Messrs. Lundgren and Hollaar) identified therein, at the addresses therein, and (3) on the following additional counsel identified, at the listed addresses, in the Certificate of Service submitted with the Brief for Defendant-Appellant Microsoft: Ms. O'Sullivan and Mr. Schwartz.

I have served the above-mentioned Motion by hand with the following exceptions: Mr. Boe has been served by facsimile and overnight mail; Mr. Schwartz has been served by e-mail (at his suggestion) and overnight mail; Messrs. Burton, Getman, Hollaar, and Lundgren have, with their consent, been served by first-class mail only.

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Laura Bennett Peterson